2,4-D

Also known as: 2,4-Dichlorophenoxyacetic acid, Weed-B-Gone, Acme, Aquakleen
Chemical reference number (CAS): 94-75-7

WHAT IS 2,4-D?

2,4-D is a popular weed killer used to control weeds like dandelions, clover, and thistles. In its pure form, it is a colorless crystal that dissolves easily in water. Nearly 60% of the 2,4-D sold in the United States is used on agricultural crops. The rest is used on range and pasture land, lawns and turf, forests and in surface water.

In the home it may be found in common weed-and-feed products used on lawns. 2,4-D can contaminate air during, and shortly after it's applied. It can also be carried along by rainwater. Soil may be contaminated with 2,4-D when the chemical is spilled or improperly disposed.

HOW ARE PEOPLE EXPOSED TO 2,4-D?

Touching: People and their pets can be exposed to 2,4-D when they play or walk on treated grass. Higher levels of exposure are possible during its manufacture, distribution, or application.

Drinking/Eating: 2,4-D is rarely found in drinking water. People who handle contaminated soil may be exposed when they touch their mouths or eat with dirty hands.

Breathing: When 2,4-D is applied to lawns people can inhale mist or dust that contains the chemical. It can be carried indoors on shoes or in windblown dust. Once inside, 2,4-D breaks down slowly and can contaminate the indoor air.

DO STANDARDS EXIST FOR REGULATING 2,4-D?

Water: The state and federal drinking water standards for 2,4-D are both set at 70 parts per billion (ppb). We suggest you stop drinking water that contains more than 70 ppb of 2,4-D.

Air: No standards exist for the amount of 2,4-D allowed in the air of homes. We use a formula to convert work place limits to suggested home limits. Based on the formula, we recommend levels of 2,4-D in household air be no higher than 0.2 parts per million.

WILL EXPOSURE TO 2,4-D RESULT IN HARMFUL HEALTH EFFECTS?

The following symptoms may occur immediately or shortly after high level exposure to 2,4-D:

- Severe burning in throat and chest
- Skin rash
- Stiffness of arms and legs
- Lack of coordination
- Drowsiness
- Loss of appetite
- Vomiting
- Liver and kidney function changes
- Stupor and coma at very high levels

Health effects of concern after several years of exposure to 2,4-D:

Cancer: The EPA has not determined the ability of 2,4-D to cause cancer. However, studies have found that exposure to 2,4-D appears to increase the risk of lymphoma (a type of cancer affecting the immune system).

Reproductive Effects: It is not known whether exposure to 2,4-D is safe during pregnancy. Some evidence suggests high-level exposure during pregnancy may increase the risk of certain birth defects.

Organ Systems: Long term or high level exposure may result in kidney and liver damage. Anemia has also been observed in laboratory animals.

In general, chemicals affect the same organ systems in all people who are exposed. However, the seriousness of the effects may vary from person to person. A person's reaction depends on several things, including individual health, heredity, previous exposure to chemicals including medicines, and personal habits such as smoking or drinking.

CAN A MEDICAL TEST DETERMINE EXPOSURE TO 2,4-D?

Testing a person's urine for "chlorophenoxyacetic acid" can confirm a recent exposure to 2,4-D, but cannot predict future symptoms. A medical evaluation after high-level exposure may include tests of liver and kidney function and tests for anemia. These tests indicate whether damage occurred, but may not be able to tell whether 2,4-D caused the damage.

Seek medical advice if you have any symptoms that you think may be related to chemical exposure.

This fact sheet summarizes information about this chemical and is not a complete listing of all possible effects. It does not refer to occupational exposure or emergency situations.

FOR MORE INFORMATION

- Poison Control Center, 800-222-1222
- Your local public health agency
- Division of Public Health, BEOH, 1 West Wilson Street, Rm. 150, Madison, WI 53701-2659, (608) 266-1120 or Internet: http://dhfs.wisconsin.gov/eh

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